



PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of

Toshiro HAYAKAWA

Appln. No.: 09/779,586

Confirmation No.: 6818

Filed: February 09, 2001

Group Art Unit: 2881

Examiner: Cecil B. Harmon

For: LASER APPARATUS INCLUDING SURFACE-EMITTING SEMICONDUCTOR EXCITED WITH SEMICONDUCTOR LASER ELEMENT, AND DIRECTLY MODULATED

**AMENDMENT UNDER 37 C.F.R. § 1.111**

Commissioner for Patents  
Washington, D.C. 20231

Sir:

In response to the Office Action dated December 19, 2001, please amend the above-

identified application as follows:

**IN THE SPECIFICATION:**

**The specification is changed as follows:**

**Paragraph bridging pages 11 and 12:**

Initially, an n-type GaAs buffer layer 12, an n-type GaAs/n-type  $Al_{0.7}Ga_{0.3}As$  multilayer optical filter 13, a n-type GaAs optical confinement layer 14, an undoped GaAs/In<sub>0.2</sub>Ga<sub>0.8</sub>As multiple-quantum-well active layer 15, a p-type GaAs optical confinement layer 16, a p-type  $Al_{0.7}Ga_{0.3}As$  carrier confinement layer 17, and a p-type GaAs cap layer 18 are formed on an n-type GaAs (001) substrate 11 by organometallic vapor phase epitaxy. The lowest sublayer of the n-type GaAs/n-type  $Al_{0.7}Ga_{0.3}As$  multilayer optical filter 13 is an AlGaAs layer. Next, a SiO<sub>2</sub>

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